Answer 1:

Bibliographic Information

Clonogenic assay with established human tumour xenografts: correlation of in vitro to in vivo activity as a basis for anticancer drug discovery. Fiebig, H. H.; Maier, A.; Burger, A. M. Oncotest GmbH, Institute for Experimental Oncology, Freiburg, Germany. European Journal of Cancer (2004), 40(6), 802-820. Publisher: Elsevier Science Ltd., CODEN: EJCAEL ISSN: 0959-8049. Journal written in English. CAN 141:342988 AN 2004:284718 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

Pluripotent cells can be grown in clonogenic assays. The tumor stem-cell fraction, which accounts for <0.4% of the total cells, and which is considered the most relevant cell type in the development of metastases and recurrences, is able to divide and to form colonies in a semisolid matrix (agar or methylcellulose). Major applications of the tumor clonogenic assay (TCA) are chemosensitivity testing of tumors and xenografts, and for assessments within drug discovery programs. Of crit. relevance for the usefulness of the TCA is whether it can predict sensitivity or resistance towards clin. used agents. When we compared the response of human tumors established as xenografts in nude mice in the TCA in vitro to that of the clin. response, 62% of the comparisons for drug sensitivity, and 92% of the comparisons for drug resistance were correct. The same percentage of true/false observations was found when tumors were tested after serial passage in nude mice in the TCA in vitro and their response compared to in vivo activity in corresponding xenografts (60% and 90%, resp.). The highest correct predictive values were, however, found when the clin. response of tumors was compared to their explants established in the nude mouse and treated in vivo. Of 80 comparisons performed, we obsd. a correct prediction for tumor resistance in 97% and for tumor sensitivity in 90%. In our opinion, the TCA with established human tumor xenografts has an important role in current drug discovery strategies. We therefore included the TCA as secondary assay in our approach to anticancer drug discovery and found that a no. of novel agents were active; these are now in advanced preclin. development or clin. trials. Thus, the tumor clonogenic assay has proven predictive value in the chemosensitivity testing of std. and exptl. anticancer drugs.

Answer 2:

Bibliographic Information

In vivo antitumor efficacy of MGI-114 (6-hydroxymethylacylfulvene, HMAF) in various human tumor xenograft models including several lung and gastric tumors. Sato, Y.; Kashimoto, S.; MacDonald, J. R.; Nakano, K. Discovery Research Laboratories, Department of Pharmacology II, Dainippon Pharmaceutical Co., Ltd., Suita, Osaka, Japan. European Journal of Cancer (2001), 37(11), 1419-1428. Publisher: Elsevier Science Ltd., CODEN: EJCAEL ISSN: 0959-8049. Journal written in English. CAN 136:288614 AN 2001:483139 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

The in vivo antitumor efficacy of MGI-114 (a semisynthetic analog of the cytotoxic sesquiterpenoid illudins) was examd. in a panel of human tumor xenografts in mice, consisting mainly of human lung and gastric tumors, and compared with that of other antitumor drugs (irinotecan, paclitaxel, cisplatin, doxorubicin, vindesine, etoposide and 5-fluorouracil). When different administration schedules were compared, daily administration of MGI-114 was more effective than intermittent administrations. In human tumor xenograft models of nasopharyngeal, breast and colon carcinoma and melanoma, MGI-114 exerted a strong antitumor activity, with complete tumor regression occurring. Moreover, in four human lung and three gastric tumor xenografts, MGI-114 had a strong antitumor activity, with complete tumor regression occurring in some cases. The antitumor efficacy of MGI-114 was generally higher than or equiv. to that of irinotecan and paclitaxel. These results support the potential utility of MGI-114 in the treatment of a variety of human solid tumors.

Answer 3:

Bibliographic Information

Acquired resistance and cross-resistance of gemcitabine to cisplatin or vindesine in human lung cancer xenografted in nude mice. Fujita, Fumiko; Fujita, Masako; Fujita, Masahide; Sakamoto, Yasuo. Experimental Cancer Chemotherapy Res. Lab. Co., Ltd., Japan. Gan to Kagaku Ryoho (1994), 21(16), 2749-55. Publisher: Gan to Kagaku Ryohosha, CODEN: GTKRDX ISSN: 0385-0684. Journal written in Japanese. CAN 122:95983 AN 1995:313513 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

One of the problems in the treatment of cancer is the development of resistance to anti-tumor agents when used repeatedly. We described the induction of resistance and cross-resistance to cisplatin (CDDP) or vindesine (VDS) and the side effects of gemcitabine, a new Ara-C deriv., in human lung cancers, Mqnu-1 or H-74 xenografted in nude mice. We investigated the effects of 4-wk treatment with gemcitabine, CDDP or VDS, followed by repeated or alternate therapy after a 4-wk observation period. Gemcitabine was effective and did not show the acquired resistance when given repeatedly. In contrast, CDDP but not VDS, when given repeatedly, showed a decrease of the anti-tumor effect in the second course. Gemcitabine was still effective to the large tumor grown after CDDP or VDS therapy. Thus, gemcitabine may not develop resistance nor show cross-resistance to CDDP or VDS. In addn., repeated treatment with gemcitabine was much safer than CDDP or VDS. These results suggest that gemcitabine is a candidate for the first choice drug in cancer treatment.

Answer 4:

Bibliographic Information

Antitumor activity of combination treatment combining gemcitabine with cisplatin or vindesine against human lung cancer xenografted in nude mice. Fujita, Fumiko; Fujita, Masako; Fujita, Masahide; Sakamoto, Yasuo. Exp. Cancer Chemother. Res. Lab. Co., Ltd., Japan. Gan to Kagaku Ryoho (1994), 21(15), 2595-601. Publisher: Gan to Kagaku Ryohosha, CODEN: GTKRDX ISSN: 0385-0684. Journal written in Japanese. CAN 122:71529 AN 1995:303437 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

Gemcitabine is a new ara-C deriv. with much more potent cytotoxic action than ara-C, which may be explained by the fact that its intracellular concn. can be maintained over a long period. We investigated the antitumor activity of combination of gemcitabine with cisplatin (CDDP) or vindesine (VDS) in lung cancer line H-74 that was relatively insensitive to gemcitabine. Mice were obsd. for 8 wk, including the 4 wk treatment period and the subsequent 4 wk drug-free period. The tumor growth inhibition rate, histol. changes, and side effects were evaluated at 4 and 8 wk after the initiation of therapy. The anti-tumor effects of treatment combining gemcitabine with CDDP or VDS were more potent and lasted longer than each drug sep. Statistical anal. shows that the treatment combining gemcitabine with CDDP was additive or synergistic at 4 and 8 wk after initiation, whereas the treatment combining gemcitabine with VDS was only additive at 4 wk after initiation and additive or synergistic at 8 wk after initiation. The side effects of both combination groups were less than those obsd. ni only CDDP or VDS-treatment animals. These results suggest the usefulness of a combination therapy combining gemcitabine with CDDP or VDS in future clin. applications.

Answer 5:

Bibliographic Information

Combination effect of navelbine (vinorelbine ditartrate) with cisplatin against murine P388 leukemia and human lung carcinoma xenografts in mice. Ashizawa, Tadashi; Asada, Masao; Kobayashi, Eiji; Okabe, Masami; Gomi, Katsushige; Hirata, Tadashi. Pharm. Res. Lab., Kyowa Hakko Kogyo Co. Ltd, Nagaizumi, Japan. Anti-Cancer Drugs (1993), 4(5), 577-83. CODEN: ANTDEV ISSN: 0959-4973. Journal written in English. CAN 120:182566 AN 1994:182566 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

The in vivo combination effect of navelbine (NVB, KW-2307) plus cisplatin was compared with that of vindesine (VDS) plus cisplatin in terms of antitumor activity and side effects. The antitumor activity of NVB or cisplatin against i.p. inoculated P388 leukemia was augmented by their combination on various schedules when the interval of administrations was within 24 h. Against i.v. inoculated P388 leukemia, the most significant combination effect was obsd. when cisplatin was administered 4 h after NVB injection (ILS(%) > 451) and three long-term survivors were obsd. On this schedule, the combination of LD10 of each drug was achieved, indicating the lack of addn. of toxicity. This was further proved by examn. of body wt. change, white blood cell count and platelet count. Interestingly, significant elevation of blood urea nitrogen concn. by cisplatin was prevented by the combination with NVB. The combination of max. tolerated dose of NVB and cisplatin was also tolerable in nude mice, and their combination effect was obsd. against human lung large cell carcinoma Lu-65 and adenocarcinoma PC-12. The no. of toxic death mice was more in VDS plus cisplatin-treated groups than in NVB plus cisplatin-treated groups, indicating that the combination chemotherapy of NVB plus cisplatin is a better regimen than that of VDS plus cisplatin in exptl. tumor systems.

Answer 6:

Bibliographic Information

Fundamental and clinical investigations on the reinforcement of the effects of combination cancer chemotherapy by flow cytometric analysis of DNA histograms. New attempts at reinforcement of antitumor effects using FCM. Sato, Yasumitsu. Sch. Med., Akita Univ., Japan. Akita Igaku (1986), 13(4), 561-86. CODEN: AKIGDV ISSN: 0386-6106. Journal written in Japanese. CAN 107:168379 AN 1987:568379 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

The effects of cis-diamminedichloroplatinum (CDDP), peplomycin (PEP), mitomycin C (MMC), adriamycin (ADM), etoposide (VP-16), 5-fluorouracil (5-FU), and vindesine (VDS) upon the viability and cell cycle progression of cultured human esophageal cancer cells (TE-2, AE-2), human esophageal (AEN-2), or gastric (TK) tumor xenografts growing in nude mice were measured and compared using flow cytometry (FCM) in order to improve the methods of selecting the individual agents and establish the most effective regimen for combination cancer chemotherapy. Anal. of the influence of chemotherapeutic agents on cell cycle kinetics using FCM appeared to be very important in the development of an effective cancer chemotherapy. Recruitment and partial synchronization were esp. useful in reinforcing the antitumor effects of combination chemotherapy on solid cancers.

Answer 7:

Bibliographic Information

Effects of alternating chemotherapy with 2 non-cross-resistant drug combinations on human alimentary and breast cancer xenografts in nude mice. Fujita, Fumiko; Fujita, Masahide; Yamauchi, Teruo; Sakamoto, Yasuo; Shimozuma, Kojiro; Inaba, Hiizu; Taguchi, Tetsuo. Res. Inst. Microb. Dis., Osaka Univ., Osaka, Japan. Gan to Kagaku Ryoho (1987), 14(5, Pt. 1), 1297-304. CODEN: GTKRDX ISSN: 0385-0684. Journal written in Japanese. CAN 107:126598 AN 1987:526598 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

The effectiveness of alternating chemotherapy with the combination regimens I [mitomycin C (MMC) and 5'-deoxy-5-fluorouridine (5'-DFUR)] and II [cisplatin(CDDP), 5'-DFUR, and vindesine(VDS)] was evaluated using 3 lines of cancer xenografts (breast, colon, and pancreas) in nude mice with special emphasis on relapse-free survival. Results showed that cyclic delivery of two non-cross-resistant drug combinations with optimal treatment doses and timing prevented toxic effects and induced long-term survival without relapse.

Answer 8:

Bibliographic Information

Combination chemotherapy with three or four drugs on human breast and gastrointestinal cancer xenografts in nude mice (II). Fujita, Fumiko; Fujita, Masahide; Sakamoto, Yasuo; Shimozuma, Kojiro; Inaba, Hiizu; Taguchi, Tetsuo. Res. Inst. Microb., Osaka Univ., Osaka, Japan. Gan to Kagaku Ryoho (1987), 14(5, Pt. 1), 1252-9. CODEN: GTKRDX ISSN: 0385-0684. Journal written in Japanese. CAN 107:126597 AN 1987:526597 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

Combined applications of 4 drugs, vindesine (VDS), methotrexate (MTX), cisplatin (CDDP) and 5'-DFUR (5'-deoxy-5-fluorouridine) against 3 lines of human breast cancer (H-62, H-31, H-71), and one line each of gastric cancer (H-55) and colon cancer (H-110) xenografted into nude mice were evaluated in comparison with CAF (cyclophosphamide, adriamycin and 5-fluorouracil (5-FU) therapy which is commonly used for breast cancer. Combination therapy with 3 drugs (VDS, CDDP and 5'-DFUR) or 4 drugs (VDS, CDP, MTX and 5'-DFUR) achieved a marked effect with tumor shrinkage in 3 lines of tumors (H-55, H-31 and H-62). Moreover, remarkable effects were shown even in the other 2 lines which were insensitive to every single-agent therapy. A synergistic effect was obtained in 3 of the 5 lines examd. These combination therapies were histol. superior to therapies employing single-drug or CAF therapy. The side effects for combination of these 3 or 4 drugs evaluated by body wt. loss were transient and equiv. to maximal dose of VDS or CDCP.

Answer 9:

Bibliographic Information

Drug localization and growth inhibition studies of vindesine-monoclonal anti-CEA conjugates in a human tumour xenograft. Rowland, G. F.; Simmonds, R. G.; Gore, V. A.; Marsden, C. H.; Smith, W. Lilly Res. Cent. Ltd., Windlesham/Surrey, UK. Cancer Immunology Immunotherapy (1986), 21(3), 183-7. CODEN: CIIMDN ISSN: 0340-7004. Journal written in English. CAN 105:17952 AN 1986:417952 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

The distribution of [3H]vindesine (3H-VDS) was studied in the tissues and tumors of athymic mice bearing a human colorectal tumor xenograft. Selective tumor localization was obtained when 3H-VDS was injected as a conjugate with a monoclonal, anti-CEA antibody (11.285.14) but not as a conjugate with a nonbinding monoclonal IgG1 (Ag8) or as free succinoyl-VDS. The amts. of VDS that localized in the tumor following injections of 3H-VDS-11.285.14 increased in proportion to the amt. injected, over a wide dose range. Conjugates prepd. with the Fab fragments of the antibody showed no evidence of selective tumor uptake in comparison with normal tissues. Various dose levels of VDS-11.285.14 conjugate and free VDS were studied for effects on the growth of the tumor xenograft. A growth inhibition of 50% was obtained at 1.5 mg/kg with free VDS and at 2.5 mg/kg with conjugated VDS. The conjugate was, however, considerably less toxic.

Answer 10:

Bibliographic Information

Screening test of antitumor agents by human tumor cell lines in nude mice in ascitic form. Kitahara, Takeshi; Minato, Keisuke; Shimoyama, Masanori. Natl. Cancer Cent. Hosp., Japan. Gan no Rinsho (1984), 30(9), 1158-67. CODEN: GANRAE ISSN: 0021-4949. Journal written in Japanese. CAN 102:17008 AN 1985:17008 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

Human breast cancer and leukemic cells implanted in nude mice appeared to be useful models for the screening of neoplasm inhibitors. The sensitivities of implanted tissues to drugs were similar to those found in patients. Studies on the suitable route of administration in these mice provide the best administration routes for humans.

Answer 11:

Bibliographic Information

Effect of phase I and II chemotherapeutic agents against human lymphomas heterotransplanted in nude mice. Sordillo, Peter P.; Helson, Christiane; Lesser, Martin; Helson, Lawrence. Sch. Med., Cornell Univ., New York, NY, USA. Oncology (1983), 40(1), 15-17. CODEN: ONCOBS ISSN: 0030-2414. Journal written in English. CAN 98:154964 AN 1983:154964 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

Ten chemotherapeutic agents, mostly phase I and II drugs, were tested for activity against 2 human lymphomas heterotransplanted in nude mice. Three of these agents have been tested in phase II trials in patients with lymphoma and found to lack activity; a corresponding lack of activity was found in lymphoma-bearing nude mice. Apart from cyclophosphamide [50-18-0], which is known to have activity against lymphoma and was used as a pos. control, only dianhydrogalactitol (DAG) [23261-20-3] had antitumor activity in the lymphoma-bearing nude mice. Tumor regressions induced by DAG in a heterotransplanted diffuse histiocytic lymphoma were significant.

Answer 12:

Bibliographic Information

A comparison of the response of human lung carcinoma xenografts to vindesine and vincristine. Evans, B. D.; Smith, I. E.; Shorthouse, A. J.; Millar, J. L. Inst. Cancer Res., Sutton/Surrey, UK. British Journal of Cancer (1982), 45(3), 466-8. CODEN: BJCAAI ISSN: 0007-0920. Journal written in English. CAN 97:16745 AN 1982:416745 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

vindesine [53643-48-4] (3.0 Mg/kg) was more effective than vincristine [57-22-7] (1.2 mg/kg) in delaying the growth of small-cell human lung carcinoma xenografts in mice, but the 2 were equally effective in inhibiting adenocarcinoma xenografts.

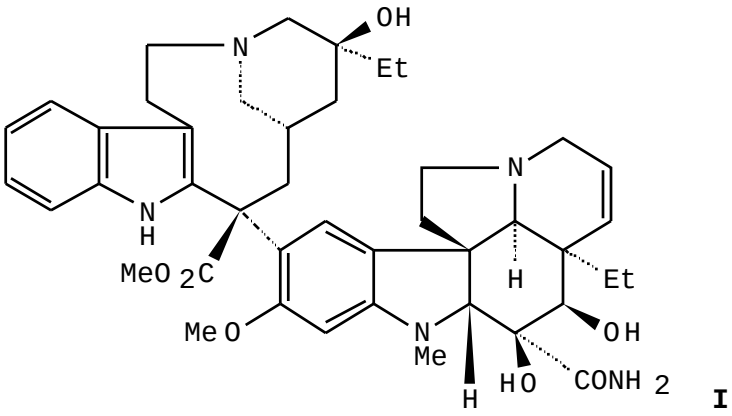
Answer 13:

Bibliographic Information

Effect of desacetyl vinblastine amide (DVA) against human sarcomas heterotransplanted in nude mice. Sordillo, Peter P.; Hajdu, Steven I.; Magill, Gordon B.; Lesser, Martin; Helson, Lawrence. Mem. Sloan-Kettering Cancer Cent., New York, NY, USA. Cancer Clinical Trials (1980), 3(4), 391-4. CODEN: CCTRDH ISSN: 0190-1206. Journal written in English. CAN 93:230906 AN 1980:630906 CAPLUS (Copyright (C) 2008 ACS on SciFinder (R))

Abstract

The efficacy of desacetyl vinblastine amide (I) [53643-48-4] was tested against 5 human sarcomas heterotransplanted into nude mice. Marked antitumor effect was found against a lipoblastic liposarcoma, including complete regressions of tumor in some animals. A lesser, though statistically significant, antitumor effect was obsd. with a malignant schwannoma. No antitumor activity was seen against a leiomyosarcoma, epithelioid sarcoma, or Erwing's sarcoma. Thus, I deserves study in the treatment of human patients with malignant sarcomas.



I

Answer 14:

Bibliographic Information

Efficacy and selectivity of vindesine monoclonal anti-carcinoembryonic antigen antibody conjugates on human tumor cell lines grown as xenografts in nude mice. Casson A G; Ford C H; Marsden C H; Gallant M E; Bartlett S E NCI monographs : a publication of the National Cancer Institute (1987), (3), 117-24. Journal code: 8610384. ISSN:0893-2751. Journal; Article; (JOURNAL ARTICLE); (RESEARCH SUPPORT, NON-U.S. GOV'T) written in English. PubMed ID 3821911 AN 87144676 MEDLINE (Copyright (C) 2008 U.S. National Library of Medicine on SciFinder (R))

Abstract

The therapeutic potential of immunoconjugates comprising vindesine and a monoclonal anti-CEA antibody, 11-285-14, has been evaluated in vivo using a clinically relevant targeting model system. Treatment of nude mice bearing human tumor xenografts of varying target antigen (CEA) expression has demonstrated efficacy and selectivity of conjugates of vindesine with 11-285-14 on tumor growth for tumors expressing the antigen (LS174T and BENN) but not for those lacking the antigen (COLO320DM). An effect of conjugate was seen even with xenografts that achieved a no-growth state (SKCO1) but not with CEA-expressing xenografts that were resistant to free drug (SW1116). Additionally, prolonged survival of mice bearing a lung tumor xenograft was observed after conjugate treatment. The toxicity of conjugated drug was less than that of free drug, and conjugates retained efficacy up to 5 months after preparation.